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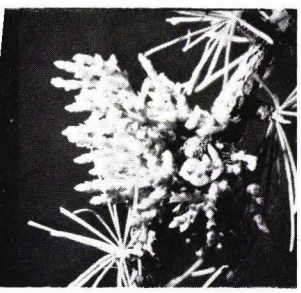

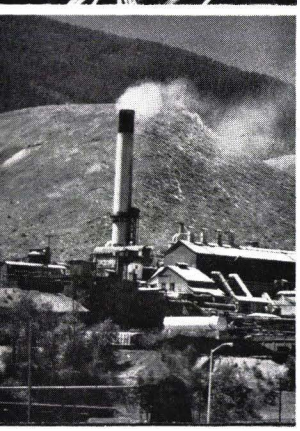

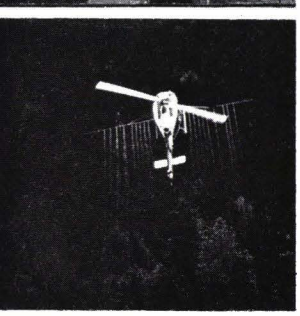

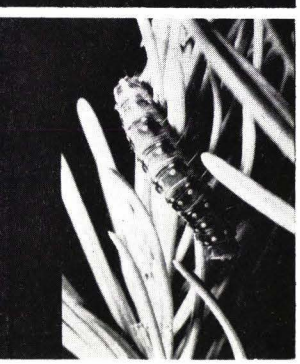

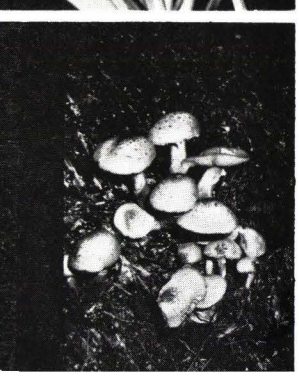

FOREST INSECT & DISEASE MANAGEMENT

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Report No. 77-13

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DWARF MISTLETOE SURVEY, HEBGEN LAKE RANGER DISTRICT, GALLATIN NATIONAL FOREST, MONTANA

by

Oscar J. Dooling, 1/ Joseph D. Bortz, 2/ Melton W. Maxwell 2/

ABSTRACT

Large areas of dwarf mistletoe-free, all-aged lodgepole pine have been identified in the West Yellowstone Basin. The option of uneven-aged management in these areas remains available to the District.

INTRODUCTION

Throughout the West Yellowstone Basin, lodgepole pine (Pinus contorta Dougl.) occurs in uneven-aged stands. The lodgepole pine-bitterbrush (Pinus contorta-Purshia tridentata) habitat type 3/ is the dominant type. Lodgepole pine dwarf mistletoe (Arceuthobium americanum Nutt. ex Engel.) occurrence is spotty. Casual inspections in July 1976 showed infestation to be either heavy (all trees infected) or nonexistent.

The District would like the option of managing stands on an uneven-aged basis where possible because much of the Basin has been clearcut. Where dwarf mistletoe is not present, the option can be retained.

A survey was conducted in November 1976 to delineate non-infested portions of two proposed timber sale areas on the District (Figure 1).

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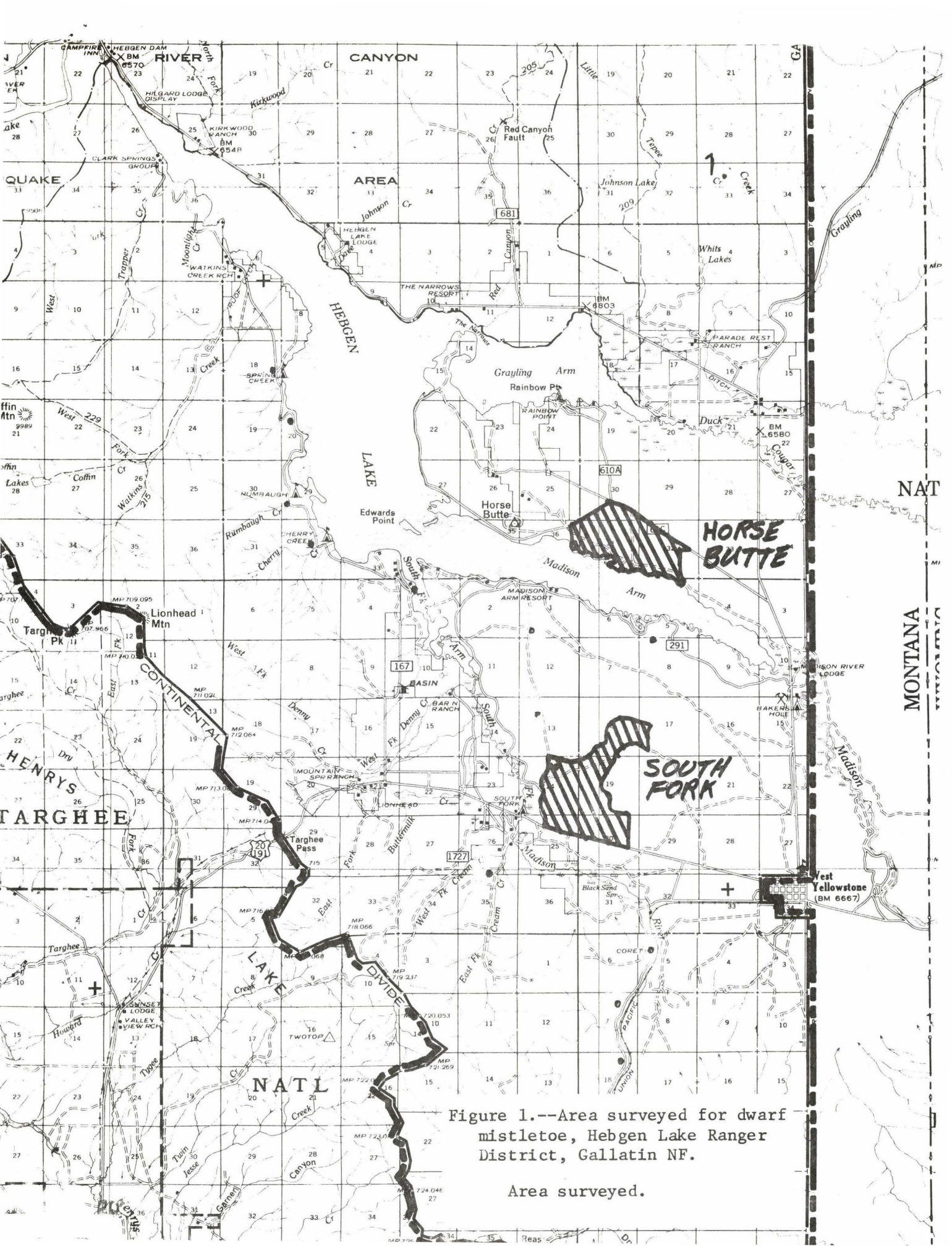
METHODS

Two 3-person crews conducted the survey. Each crew consisted of a leader with a map, compass, and pacing stick; and two observers 1 chain on either side of the leader. The crew leader recorded presence of dwarf mistletoe as determined by the observers (based on presence of plants, swellings, and brooms). Each observer covered a strip 2 chains in width. The entire area of both proposed sales was surveyed.

RESULTS AND DISCUSSION

The survey revealed that our casual observations were correct: large dwarf mistletoe-free areas do exist, in each of the proposed sale areas. Dwarf mistletoe distribution is shown on Figures 2 and 3.

The option of uneven-aged management, at least on these two areas, remains available to the District. Dwarf mistletoe-free areas probably occur throughout the Basin; this can be determined by conducting similar surveys as additional areas are proposed for timber harvest.


HEBGEN LAKE
HORSE BUTTE
SOUTH FORK
Figure 1.--Area surveyed for dwarf mistletoe, Hebgen Lake Ranger District, Gallatin NF.
Area surveyed.

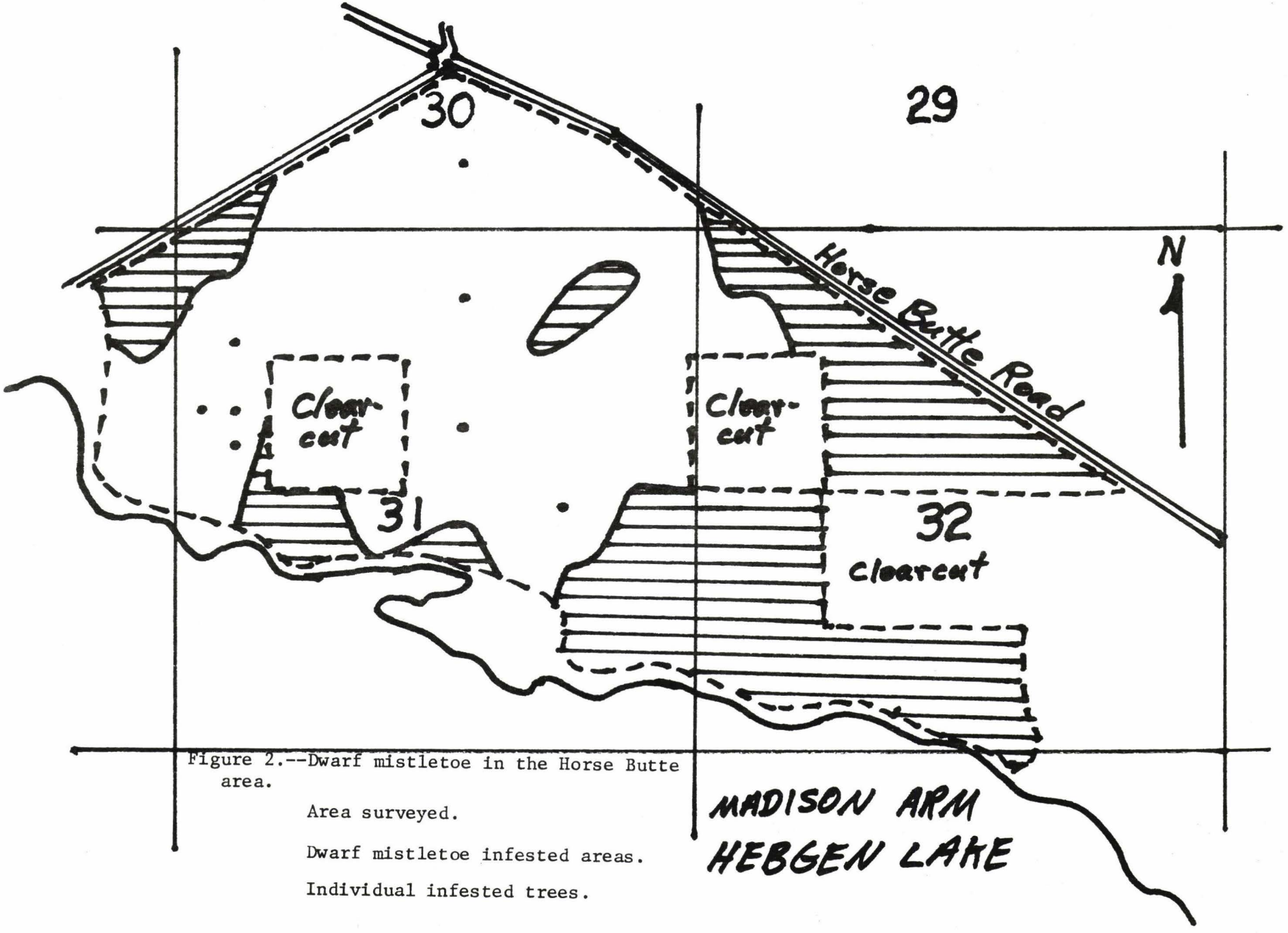


Figure 2.--Dwarf mistletoe in the Horse Butte area.

Area surveyed.

Dwarf mistletoe infested areas.

Individual infested trees.

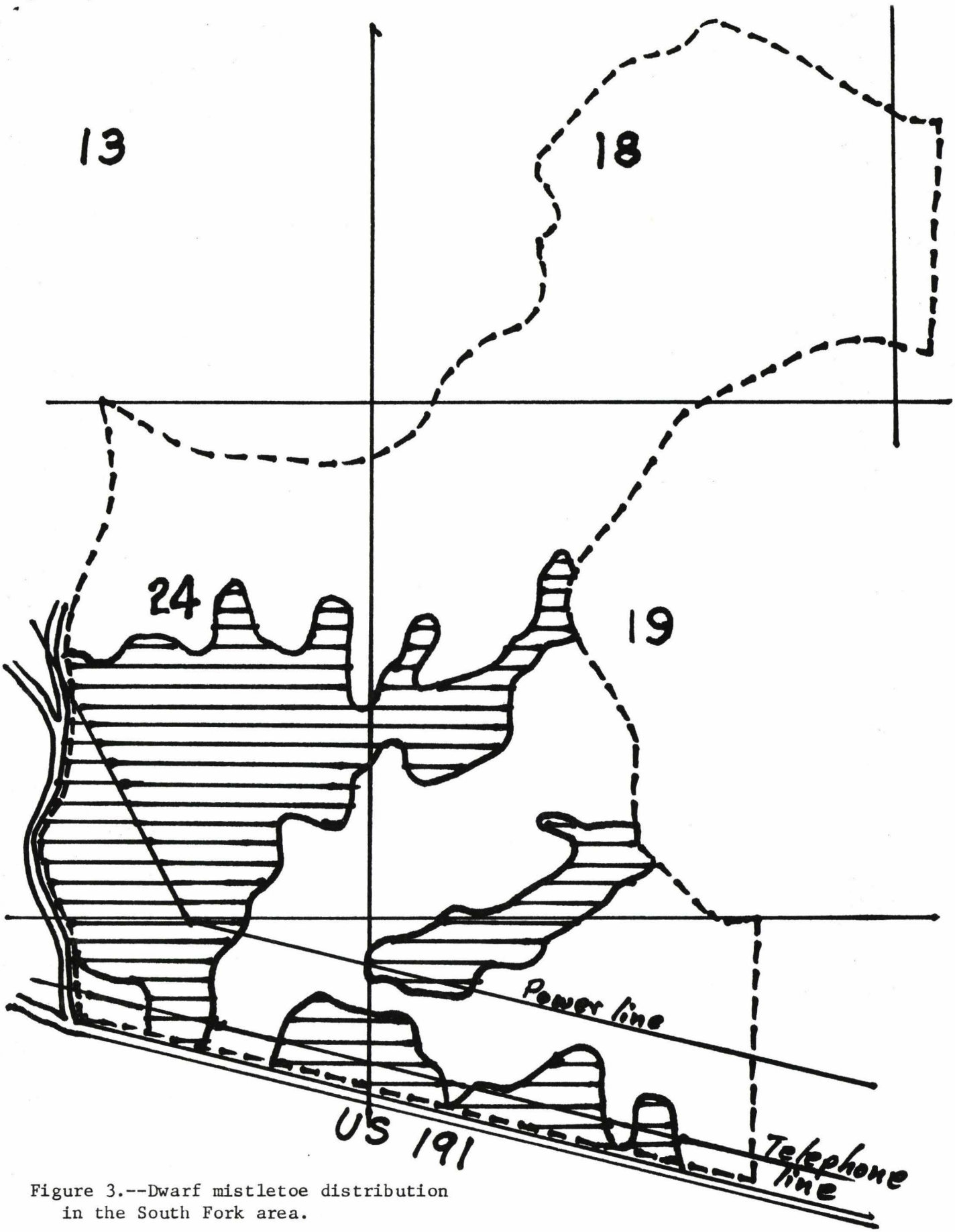


Figure 3.--Dwarf mistletoe distribution in the South Fork area.

Area surveyed.

Infested areas.